PATENT CLAIMS

1. Method for operating a communication network (10),
whereby data frames (60) defined according to a first protocol (IP) are employed, these also containing a destination address (158) in addition to the payload data (64) to be transmitted, said destination address determining the receiver of the respective data frame (60),
data packets (52 through 58) defined according to a second protocol (ATM) are generated for transmission from the data of a data frame (60), said data packets also containing a connection identifier (VPI_A/VCI_A) in addition to the data of the data frame (60), said connection identifier determining the receiver of the respective data packet (52 through 58),
the destination address (158) is read from the data packet (52) containing the destination address (158) in the receiver (22) of the data packets (52 through 58) of a data frame (60) (Step 205),
a new connection identifier (VPI_B/VCI_B) that determines a new receiver of the data packets (52 through 58) is determined on the basis of the destination address (158) (Step 212),
new data packets that contain the new connection identifier (VPI_B/VCI_B) are generated from the received data packets (52 through 58) of the data frame (60) (Step 218, 228),
the data of the data frame (60) are checked for transmission errors according to a predetermined error checking method, whereby reference data (CRC^*_{ref}) in the data frame (60) contain a rated value for the error checking (Steps 216, 226),
the new data packets of a data frame (60) received error-free are sent to the new receiver (Step 240),
characterized in that the generation of the new data packets is begun before all data packets (52 through 58) of the data frame (60) have been received.

2. Method according to claim 1, characterized in that a datum or a plurality of data (156) of the data frame (60) are modified in the receiver (22); and in that new reference data (CRC) that are employed instead of the

previous reference data (CRC^*_{ref}) are generated according to error checking methods for the data frame (60) (Step 238).

3. Method according to claim 2, characterized in that the modified data (156) of the data frame (60) contain a counter value that is modified dependent on transmissions of the data frame (60) that have already ensued (Step 206).

4. Method according to one of the preceding claims, characterized in that the error checking method and/or the calculation of the new reference data (CRC) ensues keeping step with the generation of the new data packets of the data frame (60).

5. Method according to one of the preceding claims, characterized in that the generation of the new data packets ensues keeping step with the reception of the data packets (52 through 58).

6. Method according to one of the preceding claims, characterized in that the first protocol is the Internet protocol (IP) of a protocol based on this protocol; and/or in that the second protocol is the ATM protocol (ATM) or a protocol based on this protocol.

7. Method according to one of the preceding claims, characterized in that an entry ("IP") with whose assistance the data packet containing the destination address (158) is recognized is stored in a first revaluation memory (104) for the connection identifier of the data packet (52) of a data frame (60) containing the destination address (158) (Step 202).

8. Method according to claim 7, characterized in that the entry ("IP") in the first revaluation memory (104) is overwritten by the new connection identifier (VPI_B/VCI_B) after the data packet (52) of the data frame (60) containing the destination address (158) was received (Step 214); and

in that, following the reception of the last data packet of the data frame (60), the stored, new connection identifier (VPI_B/VCI_B) is in turn overwritten by the entry ("IP").

9. Method according to claim 8, characterized in that the new connection identifier (VPI_B/VCI_B) for data packets (54 through 58) of the data frame (60) received after the data packet (52) containing the destination address are identified with the assistance of the new connection identifier (VPI_B/VCI_B) stored in the first revaluation memory (104) (Step 228).

10. Method according to one of the preceding claims, characterized in that the new connection identifier (VPI_B/VCI_B) for the data packet (52) containing the destination address is stored in a second revaluation memory (102) with whose assistance the new connection identifier (VPI_B/VCI_B) is allocated to the destination address (158) (Step 212).

11. Method according to one of the claims 7 through 10, characterized in that the first and/or the second revaluation memory (104, 102) is an associative memory).

12. Switching unit (22) for switching data, particularly for the implementation of the method according to one of the preceding claims, comprising a reception unit (100) for receiving data packets (52 through 58) with data of a data frame (60) in which data are arranged according to a first protocol (IP),
whereby the data frame (60) also contains a destination address (158) that defines the receiver of the respective data frame (60) in addition to containing the payload data (64) to be transmitted,
and whereby the data in the data packets (52 through 58) are arranged according to a second protocol (ATM) and also contain a connection identifier (VPI_A/VCI_A) that defines the switching unit (22) as receiver of the

data packets (52 through 58) in addition to containing data of the data frame (60),

comprising a processing unit (100) that reads the destination address (158) from the data packet (52) of a data frame (60) containing the destination address, determines a new connection identifier (VPI_B/VCI_B) for a new receiver on the basis of the destination address (158), and generates new data packets that contain the new connection identifier (VPI_B/VCI_B) from the received data packets (52 through 58) of the data frame (60),

comprising an error checking unit (100) that checks the received data of the data frame (60) for transmission errors according to a predetermined error checking method, whereby reference data (CRC^*_{ref}) in the data frame (60) contain a rated value for the error checking,

and with a transmission unit (100) that sends the new data packets of a data frame (60) received error-free to the new receiver,

characterized in that the processor unit (100) begins generating the new data packets before all data packets (52 through 58) of the data frame (60) have been received.

13. Switching unit according to claim 12, characterized by a first revaluation memory (104) with whose assistance a new connection identifier (VPI_B/VCI_B) is allocated to at least one connection identifier (VPI_A/VCI_A) of a received data packet (60).

14. Switching unit (22) according to claim 13, characterized in that an entry ("IP") in the first revaluation memory (104) having a predetermined value identifies connection identifiers (VPI_A/VCI_A) of received data packets (52 through 58) for which a new connection identifier (VPI_B/VCI_B) must still be calculated.

15. Switching unit (22) according to one of the claims 12 through 14, characterized by a second revaluation memory (102) with whose

assistance a new connection identifier (VPI_B/VCI_B) is allocated to at least one destination address (158).

16. Switching unit (22) according to one of the claims 13 through 15, characterized in that the first and/or the second revaluation memory (104, 102) is an associative memory.

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